

WHAT IS CLAIMED IS:

1. A graphical user interface framework comprising the elements of:
means for indicating a desired position on the screen by naturally pointing at it;

a button to indicate desire to take an action according to what is currently
displayed on the screen;

a scroll wheel to indicate desire to move selection target through a list of
screen positions in a pre-defined order;

means to detect when position on the screen is momentarily stationary and to
display additional images and/or text on the screen; and

means to zoom from one image scope to another based on user action.
2. The method of claim 1, wherein the pointing device is done using a trackball.
3. The method of claim 1, wherein the pointing device is done using a touchpad.
4. The method of claim 1, wherein the pointing device is done using conventional
remote controls along with the screen logic (up and down arrows).
5. The method of claim 1, wherein the means for indicating action is via speech
command.
6. The method of claim 1, wherein the means for indicating action is via a gesture.

7. The method of claim 1, wherein the means for indicating a scrolling action is via a gesture or movement on a touchpad.
8. The method of claim 1, wherein the means for indicating a hover response is a separate gesture.
9. The method of claim 1, wherein the means for requesting a zoom response is a gesture or a speech command.
10. The method of claim 1, wherein the display used to render the graphical user interface is a television.
11. The graphical user interface framework comprising a filter function that is a first-class visual object.
12. The method of claim 1 and 11 wherein the user requesting a zoom response by selecting from a set of filters and thereby constructs and inserts a filter object.
13. The method of claim 1 and 11 wherein the user requesting a zoom response by selecting a delete filter object and thereby removing the filter.

14. The method of claim 1 and 11 wherein the user requesting a zoom response by selecting the filter object and thereby triggering the filter operation

1. A method for displaying information on a graphical user interface comprising the steps of:

displaying a first plurality of images at a first magnification level;

receiving a first selection indication that identifies a subset of said plurality of images;

displaying a first zoomed version of said selected subset of said plurality of images at a second magnification level;

receiving a second selection indication that identifies an image within said subset of images; and

displaying a second zoomed version of said identified image, wherein said second zoomed version of said identified image includes at least one user-actuable control element.

2. The method of claim 1, further comprising the step of:

displaying a cursor which can move over said plurality of images, wherein said first and second selection indications are based on a position of said cursor.

3. The method of claim 1, further comprising the step of:

providing a transition effect between said steps of displaying said first zoomed version and said step of displaying said second zoomed version.

4. The method of claim 1, wherein said first step of displaying further comprises:
grouping each of said plurality of images by category into a plurality of groups.
5. The method of claim 4, wherein said first step of displaying further comprises the step of:
providing categories of movie genres including action, drama and comedy categories and co-locating said displayed images by movie genre category.
6. The method of claim 1, wherein said first step of displaying further comprises the step of:
providing categories of music genres including country, blues and jazz and co-locating said displayed images by music genre category.
7. The method of claim 1, wherein said plurality of images are images of cover art, each of which are associated with a media item.
8. The method of claim 4, wherein said first step of displaying further comprises the step of uniformly grouping said images such that each group has substantially the same display area.
9. The method of claim 4, wherein said first step of displaying further comprises the

step of grouping said images such that at least two of said groups have a different display area relative to one another.

10. The method of claim 8, wherein said display areas are rectangular.

11. The method of claim 9, wherein said display areas are rectangular.

12. The method of claim 1 wherein said step of receiving a first selection indication further comprises the step of:

receiving at least one signal from a pointing device indicating a selection and a location of a cursor.

13. The method of claim 12, wherein said pointing device is a wireless pointing device.

14. The method of claim 3, wherein said step of providing a transition effect further comprises the step of:

shrinking and translating the first zoomed version of said identified image.

15. The method of claim 1, further comprising the step of:

filtering a collection of images to selectively generate said first plurality of images which is a subset of said collection of images.

16. The method of claim 15, wherein said step of filtering further comprises the steps of:

displaying, prior to displaying said first plurality of images, a set of icons, each of said icons representing a subset of said collection of images; and
receiving a third selection indication that identifies one of said icons.

17. The method of claim 15, wherein said step of filtering further comprises the steps of:

displaying, prior to displaying said first plurality of images, a second plurality of images which includes said first plurality of images at a third magnification level which is less than said first magnification level; and
receiving a third selection indication that identifies said first plurality of images.

18. The method of claim 15, wherein said step of filtering further comprises:

entering, by a user, text information usable by said graphical user interface to filter said collection of images.

19. The method of claim 1, wherein said identified image is a movie cover art image and said second zoomed version of said identified image includes an information element which is selected from the group of: movie run time, price and actor information.

20. The method of claim 1, wherein said control element is a button which can be actuated to purchase a movie associated with said identified image.

21. The method of claim 1, wherein said control element is a hyperlink to information associated with other movies related to a movie associated with said identified image.

22. The method of claim 1, wherein said control element is not visible in said first zoomed version.

23. The method of claim 19, wherein said information element is not visible in said first zoomed version.

24. A graphical user interface (GUI) comprising:

a first GUI screen which displays a first plurality of images at a first magnification level;

means for receiving a first selection indication that identifies a subset of said plurality of images;

a second GUI screen which displays a first zoomed version of said selected subset of said plurality of images at a second magnification level;

means for receiving a second selection indication that identifies an image within said subset of images; and

a third GUI screen which displays a second zoomed version of said identified image, wherein said second zoomed version of said identified image includes at least one user-actuable control element.

25. The GUI of claim 24, further comprising:

means for displaying a cursor which can move over said plurality of images, wherein said first and second selection indications are based on a position of said cursor.

26. The GUI of claim 24, further comprising:

means for providing a transition effect between said steps of displaying said first zoomed version and said step of displaying said second zoomed version.

27. The GUI of claim 24, wherein said first GUI screen displays each of said plurality of images by category in a plurality of groups.

28. The GUI of claim 27, wherein said categories are movie genres including action, drama and comedy categories and displayed images are co-located on said first GUI screen by movie genre category.

29. The GUI of claim 27, wherein said categories are music genres including country, blues and jazz and said displayed images are co-located on said first GUI screen by music genre category.
30. The GUI of claim 24, wherein said first plurality of images are images of cover art, each of which are associated with a media item.
31. The GUI of claim 27, wherein said first GUI screen uniformly groups said images such that each group has substantially the same display area on said first GUI screen.
32. The GUI of claim 27, wherein said first GUI screen displays said plurality of groups such that at least two of said groups have a different display area relative to one another.
33. The GUI of claim 31, wherein said display areas are rectangular.
34. The GUI of claim 32, wherein said display areas are rectangular.
35. The GUI of claim 24 wherein said means for receiving said first selection indication further comprises:
- means for receiving at least one signal from a pointing device indicating a selection and a location of a cursor.

36. The GUI of claim 35, wherein said pointing device is a wireless pointing device.

37. The GUI of claim 26, wherein said means for providing a transition effect further comprises:

means for shrinking and translating the first zoomed version of said identified image.

38. The GUI of claim 24, further comprising means for filtering a collection of images to selectively generate said first plurality of images which is a subset of said collection of images.

39. The GUI of claim 38, wherein said means for filtering further comprises:

a fourth GUI screen, which displays, prior to displaying said first GUI screens, a set of icons, each of said icons representing a subset of said collection of images; and

means for receiving a third selection indication that identifies one of said icons.

40. The GUI of claim 38, wherein said means for filtering further comprises:

a fourth GUI screen which displays, prior to displaying said first GUI screen, a second plurality of images which includes said first plurality of images at a third magnification level which is less than said first magnification level; and
means for receiving a third selection indication that identifies said first plurality of images.

41. The GUI of claim 38, wherein said means for filtering further comprises:

means for entering, by a user, text information usable by said graphical user interface to filter said collection of images.

42. The GUI of claim 24, wherein said identified image is a movie cover art image and said second zoomed version of said identified image includes an information element which is selected from the group of: movie run time, price and actor information.

42. The GUI of claim 24, wherein said control element is a button which can be actuated to purchase a movie associated with said identified image.

43. The GUI of claim 24, wherein said control element is a hyperlink to information associated with other movies related to a movie associated with said identified image.

43. The GUI of claim 24, wherein said control element is not visible in said first zoomed version.

44. The GUI of claim 42, wherein said information element is not visible in said first zoomed version.

45. A set-top box comprising:

a processor for receiving media input, controlling media output and generating a zoomable graphical user interface (GUI); and

said GUI enabling a user to select a media item from among a plurality of media items for output to one of audio/video output devices, said GUI including:

a first GUI screen which displays a first plurality of images at a first magnification level;

means for receiving a first selection indication that identifies a subset of said plurality of images;

a second GUI screen which displays a first zoomed version of said selected subset of said plurality of images at a second magnification level;

means for receiving a second selection indication that identifies an image within said subset of images; and

a third GUI screen which displays a second zoomed version of said identified image, wherein said second zoomed version of said identified image includes at least one user-actuable control element.

46. The set-top box of claim 45, further comprising:

means for displaying a cursor which can move over said plurality of images, wherein said first and second selection indications are based on a position of said cursor.

47. The set-top box of claim 45, further comprising:

means for providing a transition effect between said steps of displaying said first zoomed version and said step of displaying said second zoomed version.

48. The set-top box of claim 45, wherein said first GUI screen displays each of said plurality of images by category in a plurality of groups.

49. The set-top box of claim 48, wherein said categories are movie genres including action, drama and comedy categories and displayed images are co-located on said first GUI screen by movie genre category.

50. The set-top box of claim 48, wherein said categories are music genres including country, blues and jazz and said displayed images are co-located on said first GUI screen by music genre category.

51. The set-top box of claim 45, wherein said first plurality of images are images of cover art, each of which are associated with a media item.

52. The set-top box of claim 48, wherein said first GUI screen uniformly groups said images such that each group has substantially the same display area on said first GUI screen.

53. The set-top box of claim 48, wherein said first GUI screen displays said plurality of groups such that at least two of said groups have a different display area relative to one another.

54. The set-top box of claim 53, wherein said display areas are rectangular.

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56. The set-top box of claim 45 wherein said means for receiving said first selection indication further comprises:

means for receiving at least one signal from a pointing device indicating a selection and a location of a cursor.

57. The set-top box of claim 56, wherein said pointing device is a wireless pointing device.

58. The set-top box of claim 45, wherein said means for providing a transition effect further comprises:

means for shrinking and translating the first zoomed version of said identified image.

59. The set-top box of claim 45, further comprising means for filtering a collection of images to selectively generate said first plurality of images which is a subset of said collection of images.

60. The set-top box of claim 59, wherein said means for filtering further comprises:

a fourth GUI screen, which displays, prior to displaying said first GUI screens, a set of icons, each of said icons representing a subset of said collection of images; and

means for receiving a third selection indication that identifies one of said icons.

61. The set-top box of claim 59, wherein said means for filtering further comprises:

a fourth GUI screen which displays, prior to displaying said first GUI screen, a second plurality of images which includes said first plurality of images at a third magnification level which is less than said first magnification level; and

means for receiving a third selection indication that identifies said first plurality of images.

62. The set-top box of claim 59, wherein said means for filtering further comprises:

means for entering, by a user, text information usable by said graphical user interface to filter said collection of images.

63. The set-top box of claim 45, wherein said identified image is a movie cover art image and said second zoomed version of said identified image includes an information element which is selected from the group of: movie run time, price and actor information.

64. The set-top box of claim 45, wherein said control element is a button which can be actuated to purchase a movie associated with said identified image.

65. The set-top box of claim 45, wherein said control element is a hyperlink to information associated with other movies related to a movie associated with said identified image.

66. The set-top box of claim 45, wherein said control element is not visible in said first zoomed version.

67. The set-top box of claim 63, wherein said information element is not visible in said first zoomed version.

1. A graphical user interface (GUI) comprising:

a first plurality of graphical user interface objects, each representing a media item, displayed at a first zoom level;

means for receiving a selection indication associated with one of said first plurality of graphical user interface objects; and

means for zooming in on, and panning toward, said one of said first plurality of graphical user interface objects to display at least said one of said first plurality of graphical user interface objects at a second zoom level,

wherein said at said second zoom level said one of said first plurality of graphical user interface objects includes different content than said one of said first plurality of graphical user interface objects at said first zoom level.

2. The graphical user interface of claim 1, wherein said second zoom level exceeds a semantic zoom threshold.

3. The GUI of claim 1, wherein said different content is additional text information which was not visible at said first zoom level.

4. The GUI of claim 1, wherein said different content includes at least one GUI control object which was not visible at said first zoom level.

5. The GUI of claim 4, wherein said at least one GUI control object is a hyperlink which provides a link to a different media item.

6. The GUI of claim 4, wherein said at least one GUI control object is a control object which, when actuates, causes said GUI to play said media item.

7. The GUI of claim 2, wherein said semantic zoom threshold is independent of a resolution of a display on which said GUI is displayed.

8. The GUI of claim 1, wherein said media item is one of a movie, a song and a television channel.

9. A method for media item selection in a media system comprising the steps of:
displaying a plurality of media items as images on a display screen of said media system;
receiving user input to said media system;
zooming in on said plurality of media items based on said user input until at least one control object is visible on said display screen; and

operating, by said user, one of said control objects to select a corresponding media item.

10. The method of claim 9, wherein said step of zooming further comprises the step of:

zooming in steps between predetermined magnification levels, wherein each step is associated with a corresponding user input.

11. The method of claim 10, wherein one of said predetermined magnification levels represents a semantic zooming threshold and wherein said at least one control object becomes visible on said display screen when said semantic zooming threshold is reached.

12. The method of claim 11, wherein said semantic zooming threshold is independent of a resolution of said display screen.

13. The method of claim 9, wherein said plurality of media items represent at least one of movies, songs and television channels.

14. A media controller comprising:

a processor for displaying a plurality of media items as images on a display screen;

an input port for receiving input;

means for zooming in on said plurality of media items based on a first input until at least one control object is visible on said display screen; and

means for playing a media item associated with said at least one control object in response to a second input.

15. The media controller of claim 14, means for zooming further comprises:

means for zooming in steps between predetermined magnification levels, wherein each step is performed in response to a received input.

16. The media controller of claim 15, wherein one of said predetermined magnification levels represents a semantic zooming threshold and wherein said at least one control object becomes visible on said display screen when said semantic zooming threshold is reached.

17. The media controller of claim 16, wherein said semantic zooming threshold is independent of a resolution of said display screen.

18. The media controller of claim 14, wherein said plurality of media items represent at least one of movies, songs and television channels.

1. A method for coordinating loading and unloading of multiple applications in a zoomable user interface (ZUI) comprising the steps of:

providing said ZUI with a virtual space which that is larger than a viewable portion of said ZUI, such that only a portion of said virtual space is displayed at a particular time;

launching a first application in response to user selection of a ZUI object visible on said ZUI;

receiving an input to said ZUI;

determining that, responsive to said input, a second application will come into view on said ZUI; and

loading at least one of data and software code associated with said second application based on said determining step.

2. The method of claim 1, further comprising the step of unloading at least one of data and software code associated with said first application.